

REMARKS

Claims 1-8 are pending in the application. Claim 1 is the sole independent claim. Claims 1-8 stand rejected. Applicants respectfully request reconsideration.

Claim Rejections Under 35 U.S.C. 102 (Anticipation).

Claims 1 and 8 stand rejected under 35 U.S.C. 102 as being anticipated by Hershey, Jr. et al (US 4,010,299) (hereafter "Hershey"). Applicants respectfully traverse.

Hershey does not anticipate claim 1 because Hershey does not disclose all of the features of claim 1. Claim 1 is directed to a process for folding a sheet into a folded sheet with at least 16 pages. According to claim 1, the following steps are carried out directly one after the other:

- a) said sheet is folded around a center line thereof running transversely to a feeding transporting direction of said sheet, whereby a first folded sheet with four pages is formed,
- b) said first folded sheet is folded around a folding line running longitudinally in relation to said feeding transporting direction, whereby a second folded sheet with eight pages is formed,
- c) said second folded sheet is folded around a folding line running longitudinally in relation to said feeding transporting direction, whereby a third folded sheet with sixteen pages is formed.

According to the claim language above, the feeding direction during the first three foldings is the same (i.e., the feeding direction is not changed until some point in time after the third folded sheet is formed). Therefore, the process according to claim 1 allows for very high speeds because no deflection from the feeding transportation direction takes place until after the third folded sheet is formed. The third folded sheet, in comparison to the initial, unfolded sheet, is relatively small and stable, with the result that the third folded sheet can be deflected at a very high installation speed, at which a fourth folded sheet can then also be formed.

Hershey does not disclose that the feeding direction remains unchanged until after a third folded sheet is formed. In fact, Hershey does not mention anything about any feeding direction of the sheet. Accordingly, Hershey can not anticipate claim 1. Applicants, therefore, respectfully request that the rejection of claim 1 over Hershey be withdrawn.

With respect to claim 8, claim 8 depends from claim 1 and is patentable for at least the reason given above.

First Claim Rejections Under 35 U.S.C. 103 (Obviousness).

Claims 1-8 are rejected under 35 U.S.C. 103 as being unpatentable over DeLise, Jr. (US 5,667,210) (hereafter “DeLise”). Applicants respectfully traverse.

DeLise shows a folding apparatus comprising a parallel folder 44 followed by a conveyor 48 which transports a folded sheet 11 in a direction transverse to the feeding direction of the parallel folder. The sheet 11 is then transported into a cross-folder. Accordingly, DeLise does not teach or suggest keeping the feeding direction constant during the first three folds to accelerate the folding speed. Thus, claims 1-8 are patentable over DeLise because, as discussed above, claims 1-8 require that the feeding direction during the first three foldings be the same. Applicants, therefore, respectfully request that the rejection of claim 1-8 over DeLise be withdrawn.

Second Claim Rejections Under 35 U.S.C. 103 (Obviousness).

Claims 1-8 are rejected under 35 U.S.C. 103 as being unpatentable over Vijuk et al. (US 6,506,275) in view of Bellanca (US 5,655,866). Applicants respectfully traverse.

Claim 1 is patentable over Vijuk in view of Bellanca because neither Vijuk nor Bellanca, considered alone or in combination, teach or suggest all of the features of claim 1.

In Vijuk, a sheet is folded by two folding units 210, 212. The first folding unit 210 “may be used to make one or more folds in an unfolded sheet of paper, all of the folds being parallel to each other” (column 8, lines 63-67) (emphasis added). The second folding unit 212 may be used to “make one more folds in an article in a direction perpendicular to the direction in which one or more initial folds were made” (column 9, lines 28 to 33). The relationship between the direction of the folding lines relative to the feeding direction is not

mentioned in Vijuk. Further, Vijuk does not teach or suggest that the feeding direction be the same for each of the first three folds. Vijuk simply states that different types of folding units can be utilized. However, this statement does not teach or suggest the steps as claimed in claim 1. Accordingly, Vijuk does not teach or suggest carrying out the following steps directly one after the other:

- a) said sheet is folded around a center line thereof running transversely to a feeding transporting direction of said sheet, whereby a first folded sheet with four pages is formed,
- b) said first folded sheet is folded around a folding line running longitudinally in relation to said feeding transporting direction, whereby a second folded sheet with eight pages is formed,
- c) said second folded sheet is folded around a folding line running longitudinally in relation to said feeding transporting direction, whereby a third folded sheet with sixteen pages is formed.

The same applies to Bellanca. Figure 4 of Bellanca shows that the folding scheme differs from the invention as well. The sheet is first folded at three parallel folding lines and then at the folding line running perpendicular thereto. See also column 3, line 60 to column 4, line 3.

Accordingly, neither Vijuk nor Bellanca, considered alone or in combination, teach or suggest all of the features of claim 1. Applicants, therefore, respectfully request that the rejection of claim 1 over Vijuk combined with Bellanca be withdrawn. With respect to claims 2-8, claims 2-8 depend from claim 1 and are patentable for at least the reason given above.

CONCLUSION

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections, and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

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